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New Coleoptera records from New Brunswick, Canada: Megalopodidae and Chrysomelidae

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Abstract

Zeugophora varians Crotch and the family Megalopodidae are newly recorded for New Brunswick, Canada. Twenty-eight species of Chrysomelidae are newly recorded for New Brunswick, including *Acalymma gouldi* Barber, *Altica knabii* Blatchley, *Altica rosae* Woods, *Altica woodsi* Isely, *Bassareus mammifer* (Newman), *Chrysolina marginata* (Linnaeus), *Chrysomela laurentia* Brown, *Crepidodera violacea* Melsheimer, *Cryptocephalus venustus* Fabricius, *Neohaemonia melsheimeri* (Lacordaire), *N. nigricornis* (Kirby), *Pachybrachis bivittatus* (Say), *Pachybrachis m-nigrum* (Melsheimer), *Phyllobrotica limbata* (Fabricius), *Psylliodes affinis* (Paykull), *Odontota dorsalis* (Thunberg), *Ophraella communa* (LeSage), *Ophraella cribrata* (LeConte), *Ophraella notata* (Fabricius), *Systena hudsonias* (Forster), *Tricholochmaea ribicola* (Brown), and *Tricholochmaea rufosanguinea* (Say), which are also newly recorded for the Maritime provinces. Collection data, habitat data, and distribution maps are presented for all these species.

Keywords

Chrysomelidae, Megalopodidae, new records, Canada, New Brunswick

Introduction

This paper treats the families Chrysomelidae and Megalopodidae. The Megalopodidae (megalopodid leaf beetles), historically considered a subfamily of Chrysomelidae (Seeno and Wilcox 1982), is a small family of leaf-feeding beetles related to the Chrysomel-

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idae. Only the genus *Zeugophora* occurs in North America. Known hosts of North American species include *Populus* and *Salix* spp. Larvae are leaf miners and adults feed externally on leaves (Clark and Riley 2002). Seven species (as subfamily Zeugophorinae in the Chrysomelidae) were reported from Canada by LeSage (1991). No species were reported from this family from New Brunswick or the Maritime provinces (New Brunswick, Nova Scotia, Prince Edward Island).

The Chrysomelidae (the leaf beetles) is one of the largest families of beetles. The Chrysomelidae, as the common name implies, are phytophagous and feed on leaves of plants, usually Angiospermae. Adults of most species are either monophagous or oligophagous and usually use terrestrial species, whereas the larvae have more diverse feeding habits. Donaciinae larvae are aquatic and live on submerged stems and roots of their host (Hoffman 1940). Case-bearing larvae are found in three subfamilies in Canada: larvae of the Clytrinae feed on debris in ant nests (LeSage and Stiefel 1996), larvae of the Cryptocephalinae feed on decaying leaves in litter (LeSage 1985, 1986a), and larvae of the Chlamisiinae eat fresh leaves in the open like the adults (LeSage 1982). Root miners are mainly found in Alticini, Eumolpinae, and Galerucini, whereas leaf miners are numerous in Alticini and in all Hispini (Lawson 1991). Riley et al. (2002) presented a general review of the Chrysomelidae of North America, and that publication should be consulted for details on the classification and a general overview of the biology of members of this family.

Riley et al. (2003) reported 139 species of Chrysomelidae from New Brunswick, Canada in their catalog of the leaf beetles of North America. Since that publication, the adventive *Oulema melanopus* (Linnaeus) and *Pyrrhalta viburni* (Paykull) have been newly reported from the province by Finnamore (1988) and Weston and Hoebeke (2003), respectively. Majka and LeSage (2007) reported on the overall distribution of *P. viburni* in Maritime provinces, and LeSage et al. (2007) on that of *O. melanopus*. The following year, Majka and LeSage (2008a) reported the presence of *Chrysolina staphylaea* (Linnaeus) in Nova Scotia and Quebec, but did not report it from New Brunswick, although it will likely be found in the province with additional sampling. Majka and LeSage (2008b) and Majka and Kirby (2011) reported on the distribution and range expansion of the adventive *Lilioceris lilii* (Scopoli) in the Maritime provinces, including New Brunswick. LeSage et al. (2008) confirmed the presence of both introduced asparagus leaf beetles (*Crioceris asparagi* (Linnaeus), *Crioceris duodecimpunctata* (Linnaeus)) in the Maritimes, including New Brunswick. Majka and LeSage (2008c) confirmed the presence of the introduced *Cassida rubiginosa* Müller in New Brunswick, and the following year LeSage and Majka (2009) confirmed the presence of the introduced *Gastrophysa polygoni* Linnaeus. Most recently, Majka and LeSage (2010) reported *Chaetocnema borealis* White and *Chaetocnema protensa* LeConte from New Brunswick in their review of the *Chaetocnema* of the Maritime provinces, increasing the number of species of Chrysomelidae known from New Brunswick to 143.

A few comments are required regarding *Crepidodera digna* Parry, *Dibolia penstemonis* Parry, and *Diachus catarius* (Suffrian) which were recorded from New Brunswick by LeS-

age (1991) but not listed by Riley et al. (2003) in their catalog. There are no specimens of *C. digna* and *D. penstemonis* in the CNC (Canadian National Collection of Insects, Arachnids, and Nematodes) and these two species were not reported from New Brunswick by Riley et al. (2003), and thus these species are excluded from the provincial list, although it is probable that both species occur in the province. There are many specimens in the CNC under the name *D. catarius* but their determinations have not been verified and *C. catarius* may be a synonym of *Diachus auratus* (Fabricius). The genus *Diachus* is in need of revision. This species is therefore excluded from the provincial list until this genus is revised and the species name of the specimens in the CNC can be verified.

Intensive collecting by the first author and others since 2003 has resulted in the discovery of additional species of Chrysomelidae from New Brunswick (Table 1). Additional records were discovered in the older material preserved in the Canadian National Collection in Ottawa, including the first record of the family Megalopodidae. The purpose of this paper is to report on these new discoveries.

Methods and conventions

The following records are based in part on specimens collected as part of a general survey by the first author to document the Coleoptera fauna of New Brunswick. A description of the habitat was recorded for all specimens collected during this survey. Locality and habitat data are presented exactly as on labels for each record. This information, as well as additional collecting notes, is summarized and discussed in the collection and habitat data section for each species.

Collection methods

Most specimens were collected by sweeping vegetation in various habitats, and beating, sweeping, or hand picking beetles from host plants. Additional records were obtained from specimens contained in the collection belonging to Natural Resources Canada, Canadian Forest Service - Atlantic Forestry Centre, Fredericton, New Brunswick and the Canadian National collection, Ottawa, Ontario.

Specimen preparation

Males and females of some species were dissected to confirm their identity. Male aedeagi were dissected in 70% ethanol and glued on tip of small points under the specimens from which they originated. The female genital structures were dissected in 70% ethanol, dehydrated in absolute alcohol, transferred into cedar oil, and mounted in Canada balsam on small transparent acetate cards pinned with the specimens from which they originated.

Distribution

Distribution maps, created using ArcMap and ArcGIS, are presented for each species in New Brunswick. Every species is cited with current distribution in Canada and Alaska, using abbreviations for the state, provinces, and territories. New records for New Brunswick are indicated in bold under Distribution in Canada and Alaska. The following abbreviations are used in the text:

AK	Alaska	**MB**	Manitoba
YT	Yukon Territory	**ON**	Ontario
NT	Northwest Territories	**QC**	Quebec
NU	Nunavut	**NB**	New Brunswick
BC	British Columbia	**PE**	Prince Edward Island
AB	Alberta	**NS**	Nova Scotia
SK	Saskatchewan	**NF & LB**	Newfoundland and Labrador

Acronyms of collections examined or where specimens reside referred to in this study are as follows:

AFC Atlantic Forestry Centre, Natural Resources Canada, Canadian Forest Service, Fredericton, New Brunswick, Canada
CGMC Christopher G. Majka Collection, Halifax, Nova Scotia, Canada
CNC Canadian National Collection of Insects, Arachnids, and Nematodes, Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada
NBM New Brunswick Museum, Saint John, New Brunswick, Canada
RWC Reginald P. Webster Collection, Charters Settlement, New Brunswick, Canada
UMNB Université de Moncton Collection, Moncton, New Brunswick, Canada

Results

Species accounts

All records below are species newly recorded for New Brunswick, Canada. Species followed by ** are newly recorded from the Maritime provinces of Canada.

The classification of the Chrysomelidae and Megalopodidae follows Riley et al. (2003).

Table 1. Species of Megalopodidae and Chrysomelidae recorded from New Brunswick, Canada.

Family Megalopodidae Latreille
Subfamily Zeugophorinae Böving & Craighead
Zeugophora varians Crotch**
Family Chrysomelidae Latreille
Subfamily Donaciinae Kirby
Tribe Plateumarini Askevold
Plateumaris balli Askevold
Plateumaris flavipes (Kirby)
Plateumaris frosti (Schaeffer)
Plateumaris fulvipes (Lacordaire)
Plateumaris germari (Mannerheim)
Plateumaris metallica (Ahrens)
Plateumaris nitida (Germar)
Plateumaris pusilla (Say)
Plateumaris rufa (Say)
Plateumaris shoemakeri (Schaeffer)
Tribe Donaciini Kirby
Donacia palmata (Olivier)
Donacia piscatrix Lacordaire
Donacia proxima Kirby
Donacia caerulea Olivier
Donacia confluenta Say
Donacia fulgens LeConte
Donacia hirticollis Kirby
Donacia magnifica J. L. LeConte
Donacia subtilis Kunze
Donacia tuberculifrons Schaeffer
Tribe Haemoniini Chen
Neohaemonia melsheimeri (Lacordaire)**
Neohaemonia nigricornis (Kirby)**
Subfamily Criocerinae Latreille
Tribe Criocerini Latreille
Crioceris asparagi (Linnaeus)
Crioceris duodecimpunctata (Linnaeus)
Lilioceris lilii (Scopoli)
Tribe Lemini Heinzen
Lema puncticollis Curtis
Oulema melanopus (Linnaeus)
Subfamily Cassidinae Gyllenhal
Tribe Chalepini Weise
Anisostena nigrita (Olivier)
Baliosus nervosus (Panzer)
Glyphuroplata pluto (Newman)
Microrhopala excavata excavata (Olivier)
Microrhopala vittata (Fabricius)
Microrhopala xerene (Newman)
Odontota dorsalis (Thunberg)**
Sumitrosis inaequalis (Weber)
Sumitrosis rosea (Weber)
Tribe Cassidiini Gyllenhal
Cassida rubiginosa Müller
Charidotella purpurata (Boheman)
Charidotella sexpunctata bicolor (Fabricius)
Deloyala guttata (Olivier)
Plagiometriona clavata clavata (Fabricius)
Subfamily Chrysomelinae Latreille
Tribe Chrysomelini Latreille
Subtribe Gonioctenina Motschulski
Gonioctena americana (Schaeffer)
Subtribe Doryphorina Motschulski
Chrysolina hyperici hyperici (Forster)
Chrysolina marginata (Linnaeus)**
Chrysolina quadrigemina (Suffrian)
Calligrapha bidenticola Brown
Calligrapha californica coreopsivora Brown
Calligrapha alni Schaeffer
Calligrapha alnicola Brown
Calligrapha confluens Schaeffer
Calligrapha ignota Brown
Calligrapha multipunctata (Say)
Calligrapha philadelphica (Linnaeus)
Calligrapha rowena Knab
Calligrapha tiliae Brown
Calligrapha vicina Schaeffer
Calligrapha virginea Brown
Calligrapha lunata (Fabricius)
Labidomera clivicollis (Kirby)
Leptinotarsa decemlineata (Say)
Subtribe Chrysomelina Latreille
Chrysomela crotchi Brown
Chrysomela laurentia Brown**
Chrysomela lineatopunctata Forster
Chrysomela mainensis mainensis J. Bechyné
Gastrophysa polygoni (Linnaeus)
Phaedon armoraciae armoraciae (Linnaeus)
Phaedon laevigatus (Duftschmid)
Phaedon oviformis (LeConte)
Phaedon viridis Melsheimer
Phratora americana canadensis Brown
Phratora purpurea purpurea Brown
Plagiodera versicolora (Laicharting)
Prasocuris vittata (Olivier)*
Subfamily Galerucinae Latreille
Tribe Galerucini Latreille
Erynephala maritima (LeConte)*

Galerucella nymphaeae (Linnaeus)
Neogalerucella calmariensis (Linnaeus)*
Neogalerucella pusilla (Duftschmid)
Ophraella conferta (LeConte)
Ophraella communa (LeSage)**
Ophraella cribrata (LeConte)**
Ophraella notata (Fabricius)**
Pyrrhalta viburni (Paykull)
Tricholochmaea alni (Fall)
Tricholochmaea cavicollis (LeConte)
Tricholochmaea decora decora (Say)
Tricholochmaea kalmiae (Fall)
Tricholochmaea perplexa (Fall)
Tricholochmaea ribicola (Brown)**
Tricholochmaea rufosanguinea (Say)**
Tricholochmaea tuberculata (Say)
Tricholochmaea vaccinii (Fall)
Trirhabda borealis Blake
Trirhabda canadensis (Kirby)
Trirhabda virgata LeConte
Xanthogaleruca luteola (Müller)
Tribe Luperini Chapuis
Subtribe Diabroticina Chapuis
Acalymma vittatum (Fabricius)
Acalymma gouldi Barber**
Diabrotica barberi R. Smith & Lawrence
Subtribe Luperina Chapuis
Phyllobrotica decorata (Say)
Phyllobrotica limbata (Fabricius)**
Scelolyperus cyanellus (LeConte)
Scelolyperus meracus (Say)
Tribe Alticini Newman
Altica ambiens alni Harris
Altica browni Mohamedsaid
Altica carinata Germar
Altica corni Woods
Altica kalmiae (Melsheimer)
Altica knabii Blatchley**
Altica prasina populi Brown
Altica rosae Woods**
Altica sylvia Malloch
Altica tombacina Mannerheim
Altica ulmi Woods
Altica woodsi Isely**
Capraita subvittata (Horn)
Chaetocnema borealis White
Chaetocnema concinna (Marsham)
Chaetocnema confinis Crotch
Chaetocnema minuta Melsheimer
Chaetocnema protensa LeConte
Crepidodera heikertingeri (Lazorko)
Crepidodera luminosa Parry
Crepidodera nana (Say)
Crepidodera populivora Parry
Crepidodera violacea Melsheimer**
Dibolia borealis Chevrolat
Dibolia melampyri Parry
Disonycha alternata (Illiger)
Disonycha latifrons Schaeffer
Disonycha xanthomelas (Dalman)
Distigmoptera borealis Blake
Distigmoptera impennata Blake
Epitrix cucumeris (Harris)
Kuschelina vians (Illiger)
Longitarsus erro Horn*
Longitarsus jacobaeae (Waterhouse)
Longitarsus luridus (Scopoli)
Longitarsus testaceus (Melsheimer)
Mantura chrysanthami (Koch)*
Phyllotreta armoraciae (Koch)
Phyllotreta cruciferae (Goeze)
Phyllotreta robusta LeConte
Phyllotreta striolata (Fabricius)
Phyllotreta zimmermanni (Crotch)
Psyliodes affinis (Paykull)**
Psyliodes cucullatus (Illiger)
Psyliodes napi (Fabricius)
Psyliodes punctulatus Melsheimer
Systena frontalis (Fabricius)
Systena hudsonias (Forster)**
Subfamily Eumolpinae Hope
Tribe Synetini
Syneta extorris borealis Brown
Syneta ferruginea (Germar)
Syneta pilosa Brown
Tribe Adoxini Baly
Bromius obscurus (Linnaeus)
Xanthonia decemnotata (Say)
Subfamily Cryptocephalinae Gyllenhal
Tribe Cryptocephalini Gyllenhal
Subtribe Pachybrachina Chapuis
Pachybrachis bivittatus (Say)**
Pachybrachis m-nigrum (Melsheimer)**
Pachybrachis peccans Suffrian
Pachybrachis pectoralis (Melsheimer)
Subtribe Monachulina Leng
Lexiphanes saponatus (Fabricius)
Subtribe Cryptocephalina Gyllenhal

Bassareus formosus (Melsheimer)*	*Triachus vacuus* LeConte
Bassareus mammifer (Newman)**	**Tribe Chlamisini Gressitt**
Cryptocephalus gibbicollis gibbiciollis Haldeman	*Exema canadensis* Pierce
Cryptocephalus notatus Fabricius	*Neochlamisus comptoniae* (Brown)
Cryptocephalus venustus Fabricius**	*Neochlamisus cribripennis* (J. L. LeConte)
Diachus auratus (Fabricius)	*Neochlamisus eubati* (Brown)
	Neochlamisus fragariae (Brown)

Notes: *New to province, **New to Maritime provinces.

Family Megalopodidae Latrielle, 1802
Zeugophorinae Böving and Craighead, 1931

Zeugophora varians Crotch, 1873**

http://species-id.net/wiki/Zeugophora_varians

Map 1

Material examined. New Brunswick, Gloucester Co., Tracadie, 30.VII.1939, W. J. Brown (1, CNC). **Kent Co.**, Kouchibouguac National Park, 5.VII.1977, S. J. Miller, 5786N (1, CNC); same locality, collector, and date, 5487A (1, CNC); same locality and collector, 9.VIII.1977, 5805B (1, CNC); same locality and collector, 16.VIII.1977, 6054V (2, CNC). **Saint John Co.,** Saint John, Rockwood Park, 7.VIII.1953, J. F. Brimley (1, CNC). **York Co.** Fredericton, 16.VII.1928, W. J. Brown (4, CNC).

Collection and habitat data. No bionomic data were associated with the specimens. This species has been recorded from *Populus balsmifera* L., *Populus tremuloides* Michx. and *Salix* (Clark et al. 2004).

Distribution in Canada and Alaska. BC, AB, SK, MB, QC, **NB** (Riley et al. 2003). These are the first records of this family for New Brunswick.

Family Chrysomelidae Latreille, 1802
Subfamily Donaciinae Kirby, 1837
Tribe Haemoniini Chen, 1941

Neohaemonia melsheimeri (Lacordaire)**

http://species-id.net/wiki/Neohaemonia_melsheimeri

Map 2

Material examined. New Brunswick, York Co., Mazerolle Settlement, 45.8765°N, 66.8260°W, 8.VI.2008, R. P. Webster, beaver meadow, sweeping vegetation along brook margin (1, RWC).

Collection and habitat data. This species has been collected from leaves and stems of pondweeds (*Potamogeton* sp.) (Potamogetonaceea) (Askevold 1987) and from leaf litter beside small lakes from October to the first snow (L. LeSage, personal observa-

tion). *Neohaemonia* species occur mostly in lotic sites near streams and are often submerged, and thus, are rarely collected (Askevold 1987). Larvae are submerged and feed on the stems and roots of *Potamogeton* (Hoffman 1940). The single adult from New Brunswick was collected by sweeping vegetation along a stream margin in early June.

Distribution in Canada and Alaska. MB, ON, QC, **NB** (LeSage 1991).

Neohaemonia nigricornis* (Kirby, 1837)*
http://species-id.net/wiki/Neohaemonia_nigricornis
Map 3

Material examined. New Brunswick, Queens Co., Scotchtown at Grand Lake, 45.8760°N, 66.1816°W, 25.VI.2003, R. P. Webster, lake margin, on foliage.

Collection and habitat data. This species has been collected from leaves and stems of pondweeds (*Potamogeton* sp.) (Askevold 1987) and probably has a similar biology as *N. melsheimeri*. One adult from New Brunswick was swept from foliage along a lake margin during June.

Distribution in Canada and Alaska. BC, MB, ON, QC, **NB** (Askevold 1987).

Subfamily Cassidinae Gyllenhal, 1813

Tribe Chalepini Weise, 1910

Odontota dorsalis* (Thunberg, 1805)*
http://species-id.net/wiki/Odontota_dorsalis
Map 4

Material examined. New Brunswick, Queens Co., Canning, near Flowers Cove off Rt. 960, 46.0363°N, 66.0387°W, 1.VII.2004, D. Sabine & R. Webster, on foliage of *Robinia pseudoacacia* L. (14, CNC, NBM, RWC). **York Co.**, Fredericton, 23.IX.2009, C. Maund, on apple trees (1, CNC).

Collection and habitat data. In New Brunswick, adults were collected from foliage of black locust (*Robinia pseudoacacia* L.) in early July. One individual was collected from an apple (*Malus pumilla* P. Mill.) tree. Larvae mine the leaves of black locust and other woody species of Fabaceae. Adults also feed on black locust and other Fabaceae but have been collected from many other tree species (Clark et al. 2004; Staines 2006).

Distribution in Canada and Alaska. MB, ON, QC, **NB** (LeSage 1991; Riley et al. 2003).

Subfamily Chrysomelinae Latreille, 1802
Tribe Chrysomelini Latreille, 1802
Subtribe Doryphorina Motschulski, 1860

Chrysolina marginata* (Linnaeus, 1758)*
http://species-id.net/wiki/Chrysolina_marginata
Map 5

Material examined. New Brunswick, Queens Co., Cranberry Lake P.N.A. (Protected Natural Area), 46.1125°N, 65.6075°W, 18.VI.2009, R. Webster & M.-A. Giguère, red oak forest, sweeping foliage (in area with *Leucanthemum vulgare* Lam.) (1, AFC). **Northumberland Co.**, Blueberry Rd. off Hwy 8, 47.3211°N, 65.4223°W, 29.VI.2007, R. P. Webster, jack pine forest with black spruce, on *Leucanthemum vulgare* Lam. (1, CNC, RWC). **York Co.**, New Maryland, 45–50.50 °N, 66–43.93 °W, 5.IX.2002, R. P. Webster (1, CNC). Charters Settlement, 45.8395°N, 66.7391°W, 20.X.2004, 20.X.2004, 26.IX.2005, 21.X.2005, 28.IX.2006, R. P. Webster, (on pavement of street) (1, CNC, 2, RWC); 15.0 km W of Tracy off Rt. 645, 45.6837°N, 66.8809°W, 16.VI.2007, R. P. Webster, red pine forest, on *Leucanthemum vulgare* Lam. (1, CNC, 1, RWC).

Collection and habitat data. Adults from New Brunswick were collected from the foliage of *Leucanthemum vulgare* Lam. (ox-eye-daisy) in open disturbed roadside sites near a red pine (*Pinus resinosa* Ait.) and a jack pine (*Pinus banksiana* Lamb.) forest. Specimens were also collected in the late fall on a paved road during warm afternoons. Adults were collected during June, September, and October.

Distribution in Canada and Alaska. AK, YT, **NB** (Riley et al. 2003). The population in New Brunswick is likely an adventive Palaearctic species known from Europe, Siberia, the Far East, and Alaska (Bieńkowski 2001).

Comment. *Chrysolina finitima* Brown, 1962 was placed in synonymy with *C. marginata marginata* (Linnaeus) by Bieńkowski (2001: 152), a synonymy accepted by Riley et al. (2003) in their catalog. It makes sense for specimens from Alaska or Yukon to belong to the nominal Palaearctic subspecies since this state and province can be considered as the easternmost part of the natural distribution of *C. marginata* that extends over the Bering Detroit into the New World. On the other hand, the presence of *C. marginata* in New Brunswick is not natural and is undoubtedly the result of a recent introduction into eastern Canada, which is not yet fully documented (LeSage, personal observations). Considering that there are nine Palaearctic subspecies (Bieńkowski 2011), it might be advisable not to use a subspecies name until our eastern population can be properly assigned to a subspecies.

Subtribe Chrysomelina Latrielle, 1802

Chrysomela laurentia* Brown, 1956*
http://species-id.net/wiki/Chrysomela_laurentia
Map 6

Material examined. New Brunswick, Carleton Co., Meduxnekeag Valley Nature Preserve, 46.1890°N, 67.6766°W, 1.VIII.2004, V. Webster & R. Webster, river margin, sweeping foliage (1, RWC); same locality but 46.1931°N, 67.6825°W, 8.VI.2005, M.-A. Giguère & R. Webster, floodplain forest, sweeping (1, RWC); same locality data, 25.VI.2007, R. P. Webster, forest near river margin, beating foliage of *Salix* sp. (1, RWC). **York Co.**, 1.5 km S of Taymouth, 46.1582°N, 66.6134°W, 15.VI.2006, R. P. Webster, Nashwaak River, on sand bar, on *Salix* sp. foliage (2, RWC). **Saint John Co.**, Saint John, 9.VI.1901, W. McIntosh (1, NBM); Saint John, VII.1901, W. McIntosh (1, NBM).

Collection and habitat data. The main host plants of *C. laurentia* are *Salix* sp., with known preferences for *Salix discolor* Mühl., *S. interior* Mühl, *S. lucida* Mühl., and *S. petiolaris* J.E. Smith (LeSage 1996), but poplars (*Populus* sp.) are also accepted (Brown 1956). In New Brunswick, this species was collected by beating foliage of *Salix* or sweeping foliage along river margins. Adults were collected during June and August.

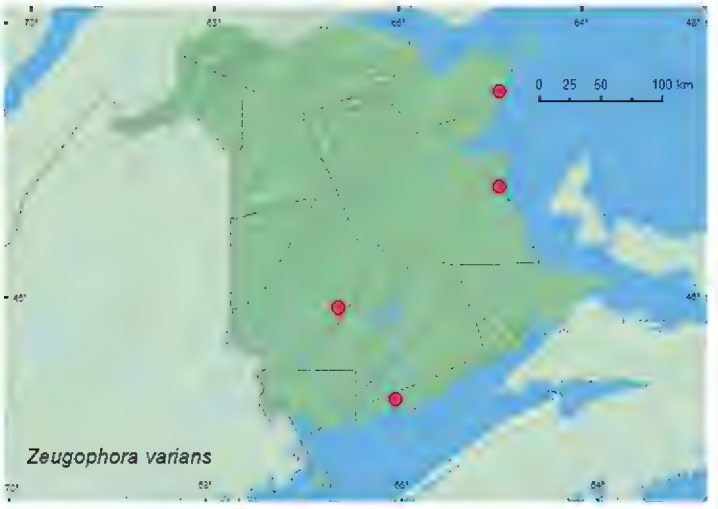
Distribution in Canada and Alaska. NT, AB, ON, QC, **NB** (LeSage 1991).

***Prasocuris vittatus* (Olivier, 1807)**
http://species-id.net/wiki/Prasocuris_vittatus
Map 7

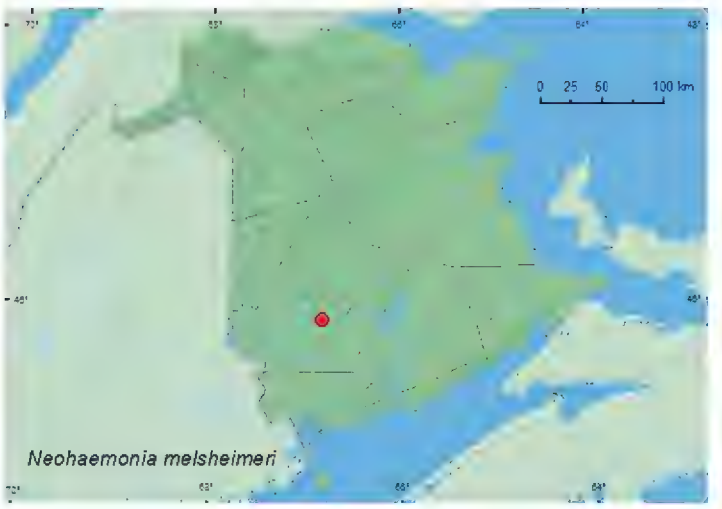
Material examined. New Brunswick, Restigouche Co., Jacquet River Gorge P.N.A., 47.8160°N, 65.9928°W, 25.VI.2008, R. P. Webster, mixed forest, sweeping roadside foliage (2, RWC). **Saint John Co.**, Saint John, VI.190?, W. McIntosh (1, NBM). **York Co.**, Canterbury, 45.8841°N, 67.6428°W, 8.VI.2004, D. Sabine & R. Webster, hardwood forest, sweeping foliage of small marsh (sedges) (1, RWC); same locality but 45.8972°N, 67.6272°W, 21.VII.2004, D. Sabine, J. Edsall, K. Bredin, & R. Webster, mixed forest with cedar, sweeping foliage near small stream (2, RWC); Canterbury, Browns Mtn. Fen, 45.8977°N, 67.6335°W, 1.VI.2005, M.-A. Giguère & R. Webster, mixed forest, sweeping foliage along forest trail (5, RWC).

Collection and habitat data. *Prasocuris vittatus* was collected by sweeping foliage along a roadside and forest trail, in a small marsh with *Carex*, and near a small stream. However, the true host is probably buttercup (*Ranunculus acris* L.) on which both larvae and adults were found and reared by the second author. *Ranunculus acris* and *Ranunculus repens* L. (Creeping buttercup) were reported as hosts for this species by Clark et al. (2004). Adults were collected during June and July.

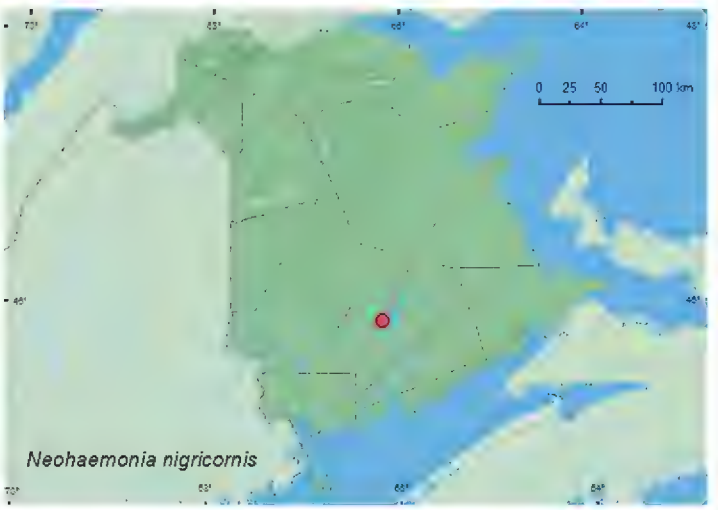
Distribution in Canada and Alaska. NT, AB, SK, MB, ON, QC, **NB**, NS (LeSage 1991).



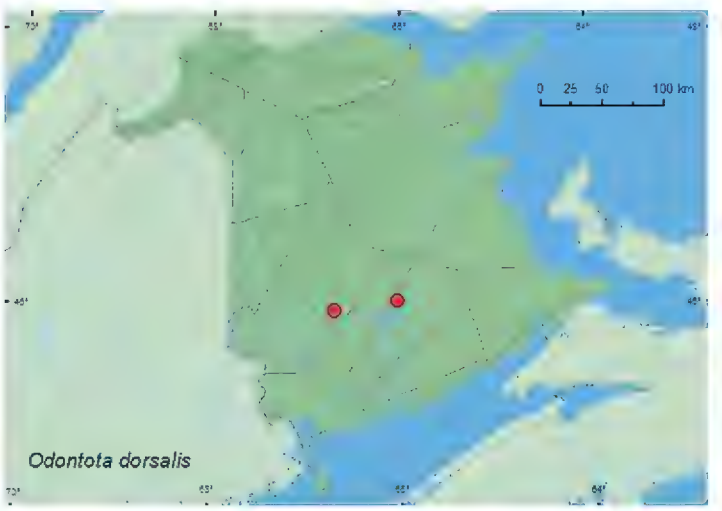
Map 1. Collection localities in New Brunswick, Canada of *Zeugophora varians.*



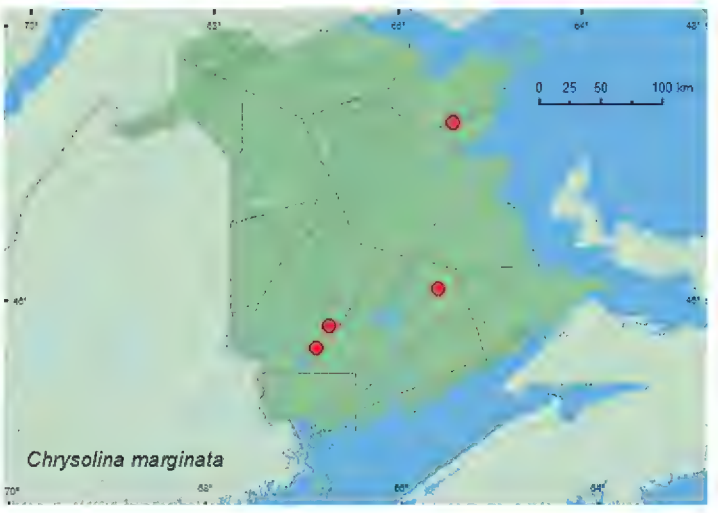
Map 2. Collection localities in New Brunswick, Canada of *Neohaemonia melsheimeri.*



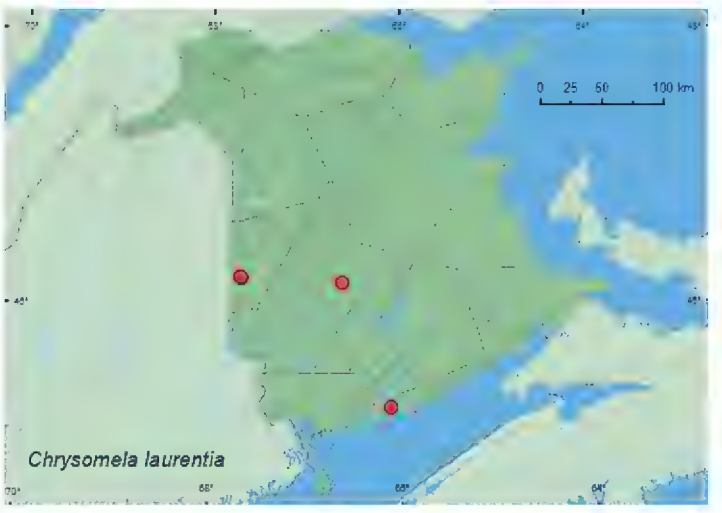
Map 3. Collection localities in New Brunswick, Canada of *Neohaemonia nigricornis.*



Map 4. Collection localities in New Brunswick, Canada of *Odontota dorsalis.*



Map 5. Collection localities in New Brunswick, Canada of *Chrysolina marginata.*



Map 6. Collection localities in New Brunswick, Canada of *Chrysomela laurentia.*

Subfamily Galerucinae Latreille, 1802
Tribe Galerucini Latreille, 1802

***Erynephala maritima* (LeConte, 1865)**
http://species-id.net/wiki/Erynephala_maritima
Map 8

Material examined. New Brunswick, Albert Co., Mary's Point, 20.VIII.2005, C. G. Majka, salt marsh (5, CGMC). **Charlotte Co.**, St. Andrews, 45.0751°N, 67.0374°W, 25.VIII.2006, R. P. Webster, sea beach, sweeping foliage (7, RWC).

Collection and habitat data. *Erynephala maritima* was swept from foliage along a sea beach in August. According to Clark et al. (2004), this species is primarily associated with various species of Chenopodiaceae (*Beta, Chenopodium, Salicornia, Salsola, Suaeda*).

Distribution in Canada and Alaska. NB, NS (LeSage 1991).

***Neogalerucella calmariensis* (Linnaeus, 1767)**
http://species-id.net/wiki/Neogalerucella_calmariensis
Map 9

Material examined. New Brunswick, Queens Co., Scotchtown near Indian Point, 45.8762°N, 66.1816°W, 5. VI.2004, 9.VII.2006, R. P. Webster, margin of lake, oak maple forest on sandy soil, sweeping foliage (6, NBM, RWC). **Sunbury Co.**, about 2.0 km ESE of Gilbert Island at St. John River, 45.8712°N, 66.2705°W, 26.VI.2003, R. P. Webster, silver maple forest, sweeping vegetation near river margin (4, NBM, RWC); ca. 2.5 km S of Beaver Dam, 45.7735°N, 66.6852°W, 13.VIII.2008, R. P. Webster, power-line right of way, sweeping foliage of *Alnus* sp. (10, NBM, RWC).

Collection and habitat data. Adults of this species were swept from foliage along a lake margin and a river margin. Adults were defoliating *Alnus* at the site south of Beaver Dam. This species was taken during June, July, and August.

Distribution in Canada and Alaska. BC, AB, MB, ON, **NB**, NS, PE (Riley et al. 2003). This is a Palaearctic species now widely established throughout much of the northern half of the USA and Canada (Riley et al. 2003). It was introduced, together with *Neogalerucella pusilla* (Duftschmid), for the biocontrol of purple loosestrife (*Lythrum salicaria* L.) and has been successful in controlling this weed (Hight et al. 1995). Consequently, its presence on alder is incidental and the damage to the leaves may have been done before by the alder flea beetle (*Altica ambiens alni* Harris), which is closely associated with this bush (LeSage 1995).

Ophraella communa* LeSage, 1986*
http://species-id.net/wiki/Ophraella_communa
Map 10

Material examined. New Brunswick, Kent Co., Bouctouche, 20.VIII.1999, D. Audet (1, UMNB). **Sunbury Co.**, Sheffield, Portobello Creek N.W.A., 45.8950°N, 66.2728°W, 4.VIII.2004, R. P. Webster, silver maple forest, on roadside ragweed (hand picking) (9, RWC); 3.0 km SE of McGowans Corner, 45.8677°N, 66.2590°W, 6.IX.2007, R. P. Webster, silver maple forest, sweeping roadside foliage near wet meadow (ragweed present) (1, RWC).

Collection and habitat data. The host plant of *O. communa* is common ragweed (*Ambrosia artemisiifolia* L.), and all life stages can be found on this plant (Welch 1978). In New Brunswick, adults of *O. communa* were collected from foliage of common ragweed on a roadside and swept from roadside foliage near a wet meadow in an area with ragweed. Adults were collected during August and September.

Distribution in Canada and Alaska. BC, AB, SK, ON, **NB** (LeSage 1986b).

Ophraella cribrata* (LeConte, 1865)*
http://species-id.net/wiki/Ophraella_cribrata
Map 11

Material examined. New Brunswick, Sunbury Co., 9.5 km NE jct Rt. 101 & 645, 45.7586°N, 66.6755°W, 22.VII.2007, 29.VII.2007, 2.VII.2008, 30.VIII.2008, R. P. Webster, old field with open sandy areas, on *Solidago* sp. (9, RWC); 7.5 km W of Tracy off Rt. 645, 45.6861°N, 66.7719°W, 26.VI.2007, R. P. Webster, old field area near roadside, on *Solidago* sp. (1, RWC).

Collection and habitat data. Host plants of *O. cribrata* include the goldenrods, *Solidago canadensis* L. (as *Solidago altissima* L. in LeSage 1986b), *Solidago bicolor* L., *Solidago nemoralis* Ait., *Solidago juncea* Ait., and *Solidago rugosa* P. Mill. (Fall 1924; LeSage 1986b; Clark et al. 2004), all of which occur in New Brunswick (Hinds 2000). Adults from New Brunswick were collected from *Solidago* sp. (species not determined) in an old field with open sandy areas and in an old field area near a roadside. Adults were captured during June, July, and August.

Distribution in Canada and Alaska. AB, SK, MB, ON, QC, **NB** (LeSage 1986b, 1991).

Ophraella notata* (Fabricius, 1801)*
http://species-id.net/wiki/Ophraella_notata
Map 12

Material examined. New Brunswick, Sunbury Co., 2.5 km S of Beaver Dam, 45.7735°N, 66.6852°W, 13.VIII.2008, R. P. Webster, powerline-right-of-way, sweeping (and hand picking) foliage of *Eupatorium perfoliatum* (15, NBM, RWC).

Collection and habitat data. The normal host plant of *O. notata* is thoroughwort or bonset (*Eupatorium perfoliatum* L.) (LeSage 1986b). Specimens from New Brunswick were abundant on this host plant in a damp meadow area along a powerline right-of-way. Adults were collected during August.

Distribution in Canada and Alaska. ON, QC, **NB** (LeSage 1986b, 1991).

Tricholochmaea ribicola* (Brown, 1938)*
http://species-id.net/wiki/Tricholochmaea_ribicola
Map 13

Material examined. New Brunswick, Albert Co., Caledonia Gorge P.N.A., off Caledonia Mountain Rd., 45.8318°N, 64.7570°W, 1.VII.2011, R. P. Webster, small *Carex* marsh, on *Ribes* sp. (10, NBM, RWC). **Carleton Co.**, Two Mile Brook Fen, 46.3594°N, 67.6800°W, 2.VI.2005, R. P. Webster, cedar swamp, on foliage of *Ribes* sp. (10, RWC).

Collection and habitat data. The New Brunswick adults were taken on wild black currant (*Ribes americanum* P. Miller) during June and July. Brown (1946) reported *T. ribicola* from *R. americanum* in other parts of its range. It has also been recorded from *Ribes vulgare* Lam. (Clark et al. 2004).

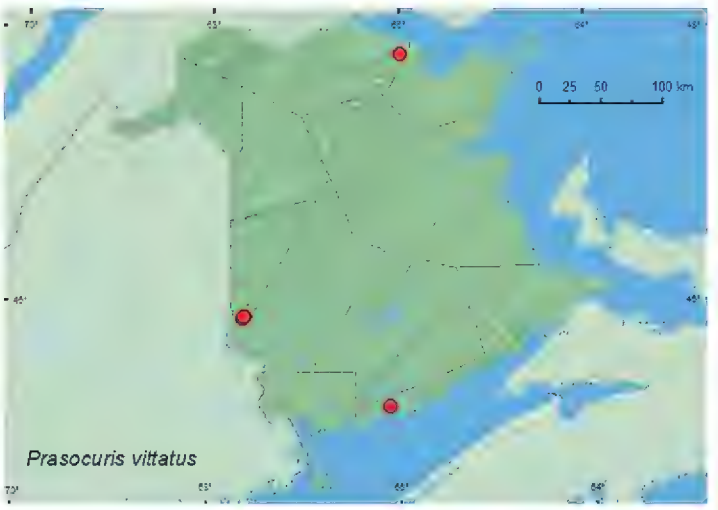
Distribution in Canada and Alaska. ON, **NB** (LeSage 1991).

Tricholochmaea rufosanguinea* (Say, 1826)*
http://species-id.net/wiki/Tricholochmaea_rufosanguinea
Map 14

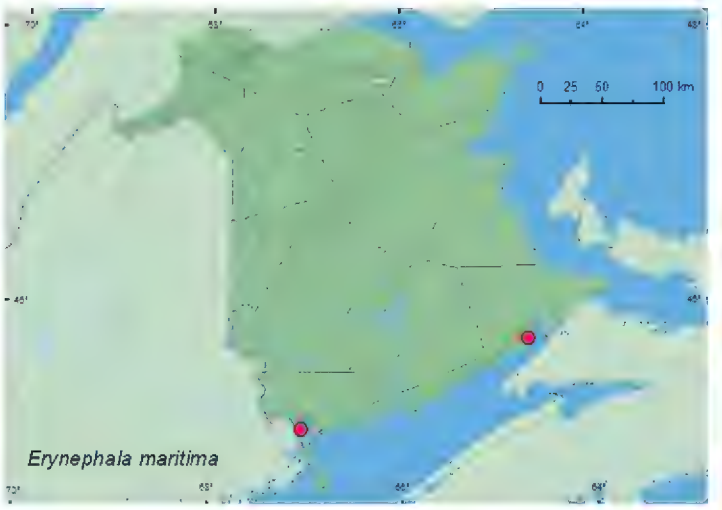
Material examined. New Brunswick, York Co., Upper Brockway, 45.5684°N, 67.0993°W, 3.VI.2005, R. P. Webster, acid (blueberry) barrens, on foliage of *Rhododendron canadense* (10, RWC).

Collection and habitat data. Adults were found on the foliage of rhodora (*Rhododendron canadense* (L.)) in a blueberry (*Vaccinium* sp.) barren during early June.

Distribution in Canada and Alaska. QC, **NB** (LeSage 1991).

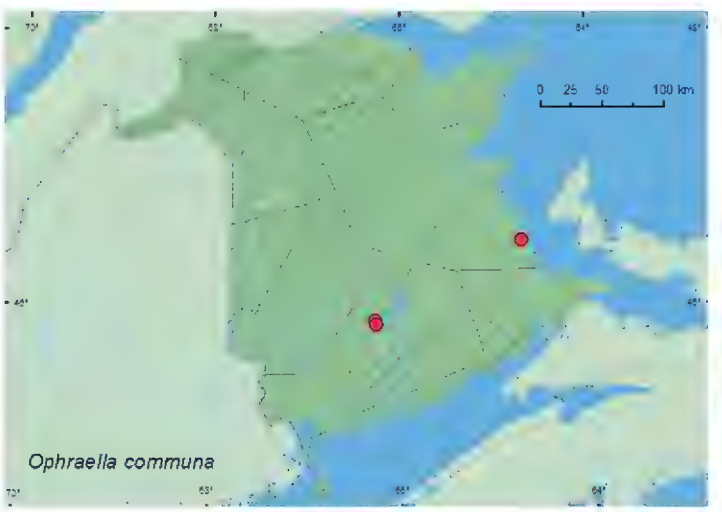


Map 7. Collection localities in New Brunswick, Canada of *Prasocuris vittatus.*

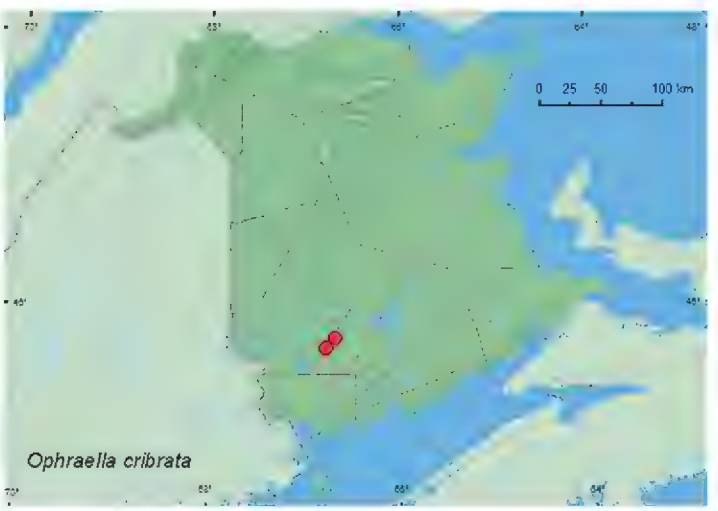


Map 8. Collection localities in New Brunswick, Canada of *Erynephala maritima.*

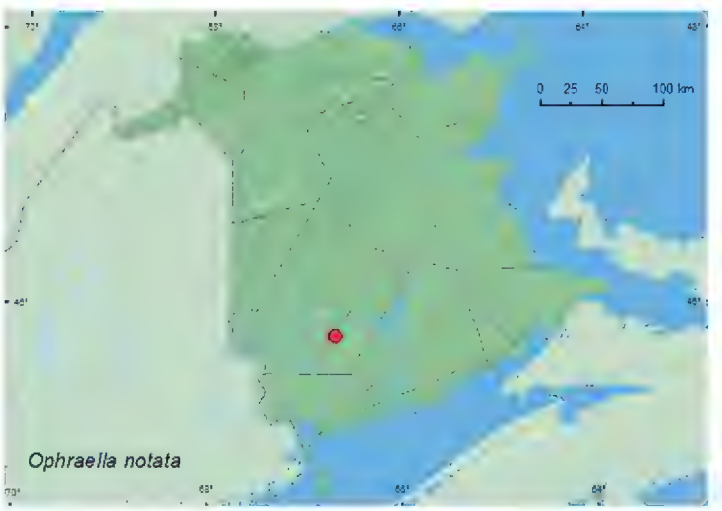
Map 9. Collection localities in New Brunswick, Canada of *Neogalerucella calmariensis.*



Map 10. Collection localities in New Brunswick, Canada of *Ophraella communa.*



Map 11. Collection localities in New Brunswick, Canada of *Ophraella cribrata.*



Map 12. Collection localities in New Brunswick, Canada of *Ophraella notata.*

Tribe Luperini Gistel, 1848
Subtribe Diabroticina Chapuis, 1875

Acalymma gouldi* Barber, 1947*
http://species-id.net/wiki/Acalymma_gouldi
Map 15

Material examined. New Brunswick, Carleton Co., Meduxnekeag Valley Nature Preserve, 46.1888°N, 67.6762°W, 27.VIII.2007, R. P. Webster, upper river margin, sweeping foliage of *Echinocystis lobata*, prickly cucumber (4, RWC).

Collection and habitat data. Specimens of this species were swept from the foliage of prickly cucumber (*Echinocystis lobata* (Michx.) T. & G.) along an upper river margin during August. Barber (1947) reported this species from squash (*Cucurbita*) and cucumber (*Cucumeris sativus* L.); Clark et al (2004) reported *Cucumeris melo* L. as a host.

Distribution in Canada and Alaska. ON, QC, **NB** (LeSage 1991).

Subtribe Luperina Chapuis, 1875

Phyllobrotica limbata* (Fabricius, 1801)*
http://species-id.net/wiki/Phyllobrotica_limbata
Map 16

Material examined. New Brunswick, Carleton Co., Jackson Falls, Bell Forest, 46.2210°N, 67.7211°W, 1.VIII.2004, 13.VIII.2007, V. Webster & R. P. Webster, mature hardwood forest, sweeping foliage (2, RWC). **Saint John Co.**, Saint John, 24.VII.1902, W. McIntosh (1, NBM). **York Co.**, Canterbury, near Browns Mountain Fen, 45.8978°N, 67.6273°W, 3.VII.2005, M.-A. Giguère & R. Webster, mixed forest, on foliage of *Corylus cornuta* (1, RWC); Charters Settlement, 45.8331°N, 66.7410°W, 11.VIII.2007, 7.VII.2008, R. P. Webster, mature red spruce and red maple forest, sweeping foliage in shaded marshy area (3, RWC).

Collection and habitat data. Specimens of this species were swept from foliage in a mature hardwood forest and in a shaded marshy area in a mature red spruce (*Picea rubens* Sarg.) and red maple (*Acer rubrum* L.) forest. One individual was collected from foliage of beaked hazelnut (*Corylus cornuta* Marsh.). Hosts reported by Clark et al. (2004) occurring in New Brunswick include common skullcap (*Scutellaria galericulata* L.) and mad-dog skullcap (*Scutellaria lateriflora* L.). Adults were collected during July and August.

Distribution in Canada and Alaska. ON, QC, **NB** (LeSage 1991).

Tribe Alticini Newman, 1834

Altica knabii* (Blatchely, 1910)*
http://species-id.net/wiki/Altica_knabii
Map 17

Material examined. New Brunswick, York Co., Charters Settlement, 45.8428°N, 66.7279°W, 28.IV.2004, R. P. Webster, mixed forest, in litter near small sedge marsh (1, RWC).

Collection and habitat data. The only adult known from New Brunswick was sifted from leaf litter near a small *Carex* marsh during April. This was probably an overwintering site. Clark et al. (2004) reported that this species was associated with evening primrose (*Oenothera biennis* L.).

Distribution in Canada and Alaska. ON, **NB** (LeSage 2008)

LeSage (2008) reported this species from Texas east to Florida and north to Minnesota and Maine in the USA.

Altica rosae* Woods, 1918*
http://species-id.net/wiki/Altica_rosae
Map 18

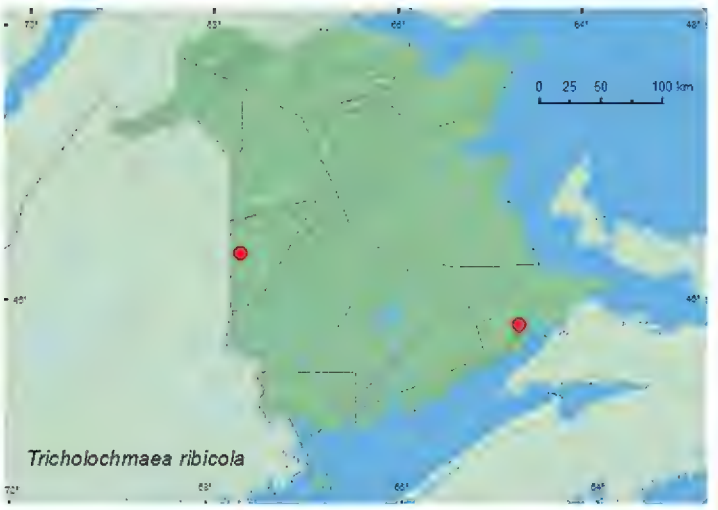
Material examined. New Brunswick, Carleton Co., Wakefield, Meduxnekeag Valley Nature Preserve, 46.1931°N, 67.6825°W, 8.VI.2005, M.-A. Giguère & R. Webster, floodplain forest, on foliage of *Rosa* sp. (1, RWC). **Queens Co.**, Grand Lake near Scotchtown, 45.8762°N, 66.1816°W, 3.VI.2007, R. P. Webster, oak / maple forest near lakeshore, sweeping foliage of *Rosa* sp. (1, RWC). **Saint John Co.**, Chance Harbour, 45.1159°N, 66.3607°W, 30.V.2006, R. P. Webster, sea beach, on foliage of *Rosa* sp. (2, RWC).

Collection and habitat data. All adults from New Brunswick were collected from the foliage of *Rosa* sp., a known host for this species (Woods 1918). Adults were found during late May and early June.

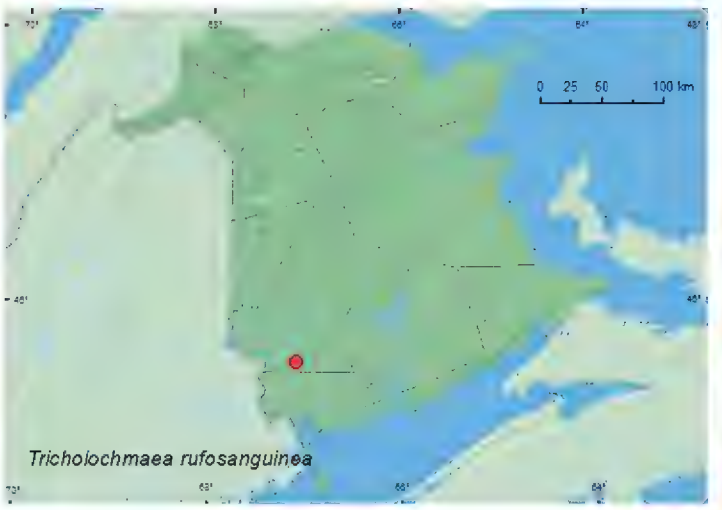
Distribution in Canada and Alaska. MB, ON, QC, **NB** (Riley et al. 2003).

Altica woodsi* Isely, 1920*
http://species-id.net/wiki/Altica_woodsi
Map 19

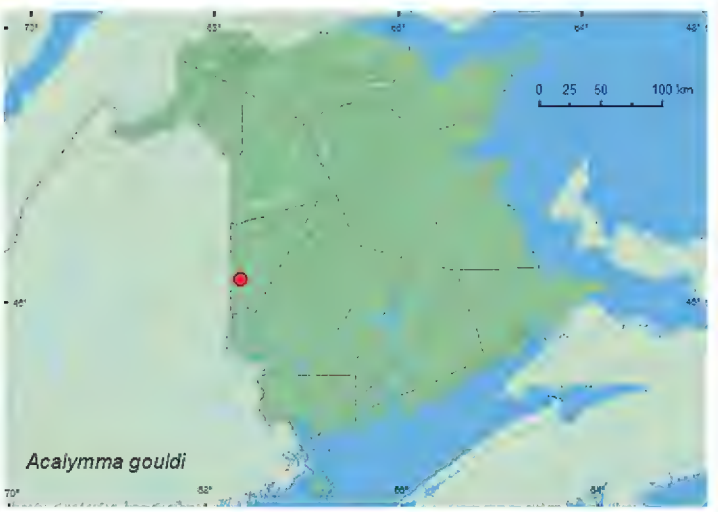
Material examined. New Brunswick, Carleton Co., Jackson Falls, Bell Forest, 46.2210°N, 67.7210°W, 12.VII.2004, K. Bredin, J. Edsall, & R. Webster, rich Appalachian hardwood forest, on foliage of *Vitis riparia* Michx. (4, RWC); same locality and collectors, 46.2252°N, 67.7190°W, 12.VII.2004, river margin, on foliage of *Vitis riparia* Michx. (2, NBM, RWC); same locality data, 1.VI.2005, M.-A. Giguère &



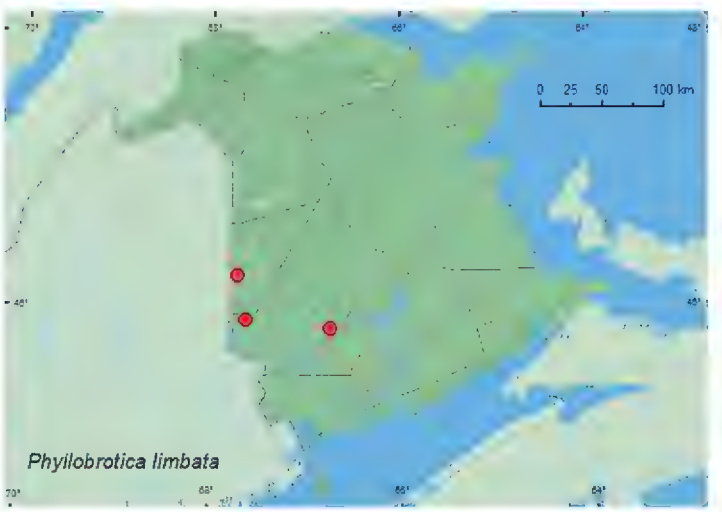
Map 13. Collection localities in New Brunswick, Canada of *Tricholochmaea ribicola.*



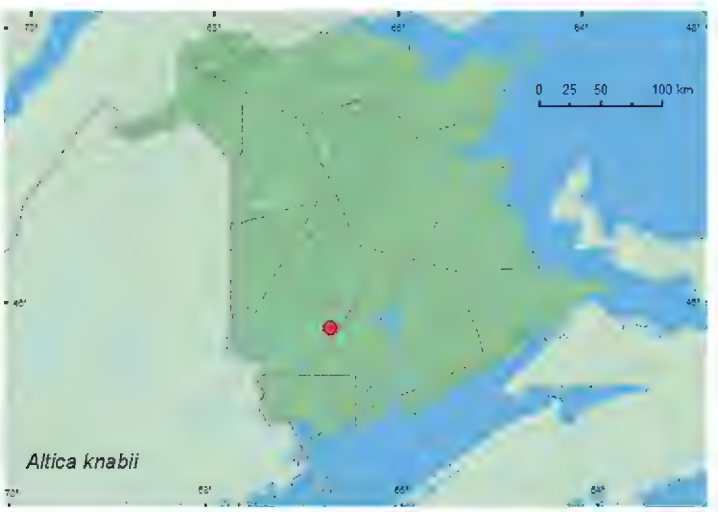
Map 14. Collection localities in New Brunswick, Canada of *Tricholochmaea rufosanguinea.*



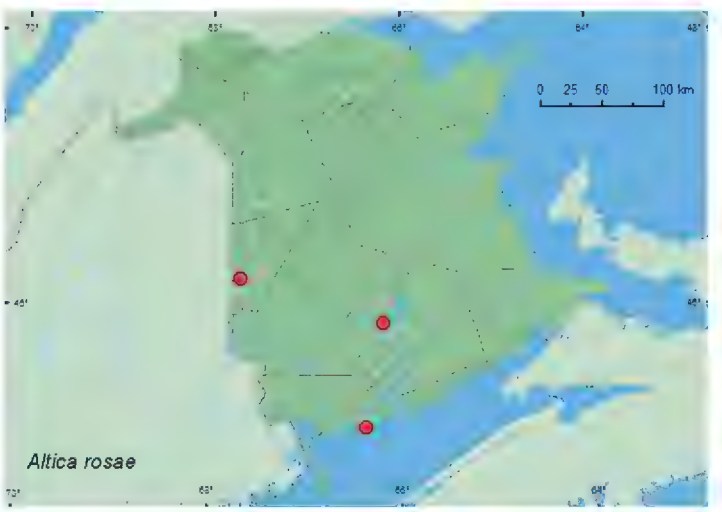
Map 15. Collection localities in New Brunswick, Canada of *Acalymma gouldi.*



Map 16. Collection localities in New Brunswick, Canada of *Phyllobrotica limbata.*



Map 17. Collection localities in New Brunswick, Canada of *Altica knabii.*



Map 18. Collection localities in New Brunswick, Canada of *Altica rosae.*

R. Webster, river margin, on foliage of *Vitis riparia* Michx. (3, RWC); Meduxnekeag Valley Nature Preserve, 46.1925°N, 67.6725°W, 13.VII.2005, R. P. Webster, mixed forest, on foliage of *Vitis riparia* Michx. (1, RWC).

Collection and habitat data. *Altica woodsi* was collected from the foliage of river bank or frost grape (*Vitis riparia* Michx.) in a rich Appalachian hardwood forest, a

mixed forest, and along river margins in New Brunswick. Adults were collected during June and July. The Virginia creeper (*Parthenocissus quinquefolia* (L.) Planch.) is an alternate host used by both the larvae and adults (LeSage and Zmudzinska 2004).

Distribution in Canada and Alaska. ON, QC, **NB** (LeSage 2002; Riley et al. 2003).

Crepidodera violacea* Melsheimer, 1847*
http://species-id.net/wiki/Crepidodera_violacea
Map 20

Material examined. New Brunswick, Carleton Co., Meduxnekeag Valley Nature Preserve, 46.1890°N, 67.6766°W, 8.VI.2005, M.-A. Giguère & R. Webster, flood plain forest, beating foliage of *Prunus virginiana* (10, RWC).

Collection and habitat data. Parry (1986) reported *Crepidodera violacea* from *Crataegus* and *Prunus*, including choke cherry (*Prunus virginiana* L.). Other host plants reported by Clark et al. (2004) known to occur in New Brunswick are *Amelanchier*, pin cherry (*Prunus pensylvanica* L.), and black cherry (*Prunus serotina* Ehrh.). Adults from New Brunswick were collected by beating foliage of choke cherry during June.

Distribution in Canada and Alaska. ON, QC, **NB** (LeSage 1991).

***Longitarsus erro* Horn, 1889**
http://species-id.net/wiki/Longitarsus_erro
Map 21

Material examined. New Brunswick, Saint John Co., Dipper Harbour, 45.1169°N, 66.3771°W, 12. IX.2006, R. P. Webster, sea beach, sweeping vegetation (1, RWC).

Collection and habitat data. One individual of this species was swept from foliage along a sea beach during September.

Distribution in Canada and Alaska. NT, BC, AB, MB, ON, QC, **NB**, NS (LeSage 1991).

***Mantura chrysanthami* (Koch, 1803)**
http://species-id.net/wiki/Mantura_chrysanthami
Map 22

Material examined. New Brunswick, Charlotte Co., near Maces Bay, 45.12447°N, 66.47346°W, 12.VIII.2007, R. P. Webster, barrier beach, sweeping vegetation (1, RWC). **Northumberland Co.**, Blueberry Rd. off Hwy 8, 47.3211°N, 65.4229°W, 29.VI.2007, R. P. Webster, jack pine forest with black spruce, sweeping foliage of *Rumex acetosella* L. (4, RWC). **Queens Co.**, Canning, Grand Lake near Scotchtown,

45.8762°N, 66.1816°W, 1.VII.2004, D. Sabine & R. Webster, lake shore, old dune with oaks, sweeping foliage (3, RWC). **Sunbury Co.**, ca. 2.5 km S of Beaver Dam, 45.7703°N, 66.6867°W, 26.VI.2007, mixed forest with red pine, along power-line cut, sweeping foliage (1, RWC). **York Co.**, Canterbury, near "Browns Mtn. Fen", 45.8978°N, 67.6273°W, 3.VII.2005, M.-A. Giguère & R. Webster, mixed forest, beating foliage (1, RWC).

Collection and habitat data. *Mantura chrysanthami* was swept or beaten from foliage from a variety of habitats in New Brunswick. These included a barrier beach, a jack pine forest, an old sand dune with red oaks (*Quercus rubra* L.), a power-line right-of-way, and a mixed forest. A small series was swept from the foliage of sheep sorrel, *Rumex acetosella* L. Adults were captured during June, July, and August. Based on personal observations and collecting by the second author in the Ottawa, ON area, *M. chrysanthemi* is monophagous on *R. acetosella* both in the larval and adult stages.

Distribution in Canada and Alaska. NF, QC, **NB** (LeSage 1991; Riley et al. 2003). This is an adventive Palaearctic species now established in most of the northeastern United States (Riley et al. 2003). Although *Mantura floridana* Crotch was cited by LeSage (1991) and Riley et al. (2003) from the Maritime provinces, the specimens determined as this species may be *M. chrysanthemi*, and thus the status of the former needs to be clarified.

Psylliodes affinis* (Paykull, 1799)*
http://species-id.net/wiki/Psylliodes_affinis
Map 23

Material examined. New Brunswick, Charlotte Co., near Maces Bay, 45.12447°N, 66.47346°W, 12.VIII.2007, R. P. Webster, barrier beach, sweeping *Solanum* sp. (10, RWC).

Collection and habitat data. A series of *P. affinis* from New Brunswick was swept from the foliage of a *Solanum* sp. on a barrier beach during August. The second author observed leaves of the climbing nightshade (*Solanum dulcamara* L.) in Aylmer (QC), north of Ottawa (ON), punctured with many small holes by adults of *P. affinis*.

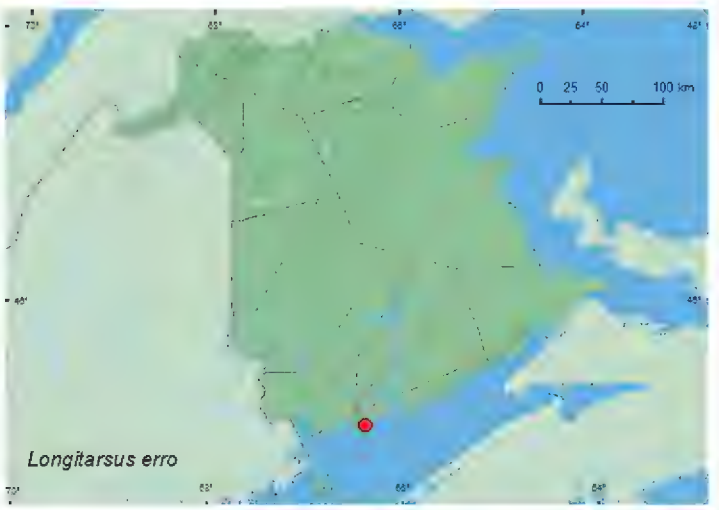
Distribution in Canada and Alaska. ON, QC, **NB** (LeSage 1991; Riley et al. 2003). This is an adventive Palaearctic species now established in most of the northeastern United States (Riley et al. 2003).

Systena hudsonias* (Forster, 1771)*
http://species-id.net/wiki/Systena_hudsonias
Map 24

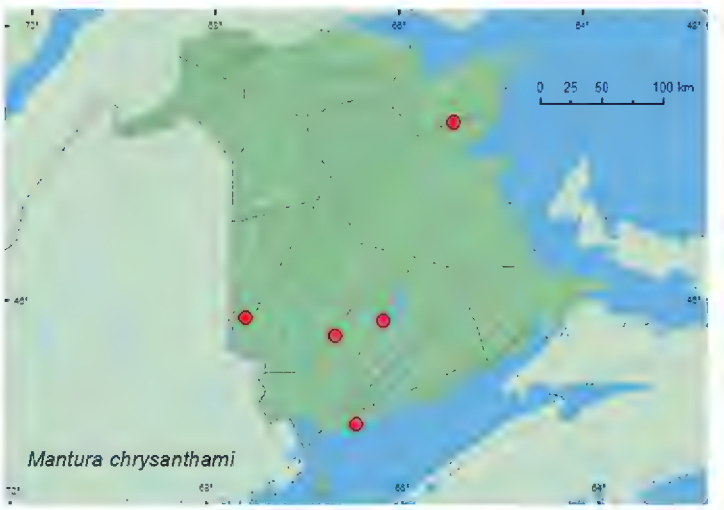
Material examined. New Brunswick, Northumberland Co., Blueberry Rd. off Hwy 8, 47.3210°N, 65.4229°W, 24.VII.2005, R. P. Webster, jack pine forest, sweeping

Map 19. Collection localities in New Brunswick, Canada of *Altica woodsi.*

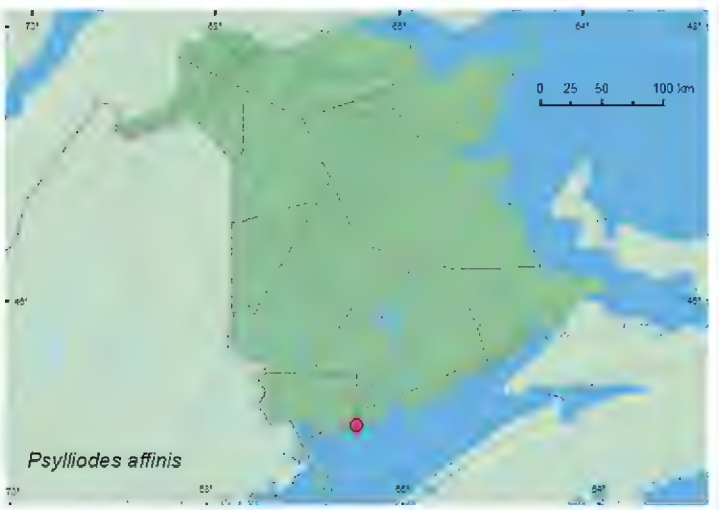
Map 20. Collection localities in New Brunswick, Canada of *Crepidodera violacea.*



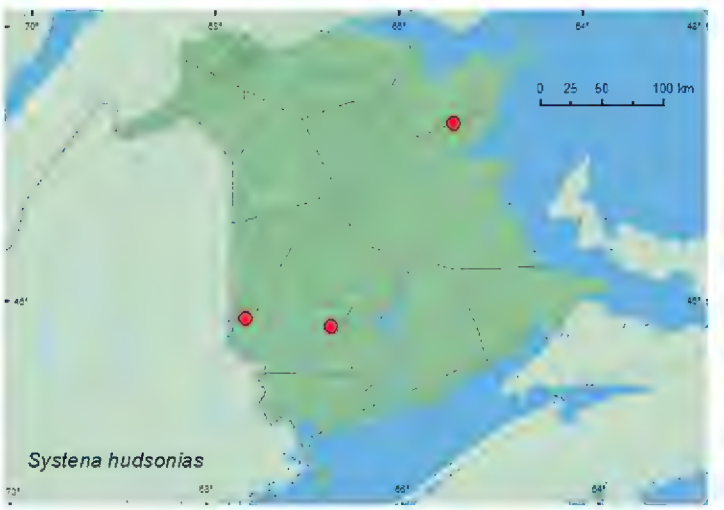
Map 21. Collection localities in New Brunswick, Canada of *Longitarsus erro.*



Map 22. Collection localities in New Brunswick, Canada of *Mantura chrysanthami.*



Map 23. Collection localities in New Brunswick, Canada of *Psylliodes affinis.*



Map 24. Collection localities in New Brunswick, Canada of *Systena hudsonias.*

(1, RWC). **York Co.**, Charters Settlement, 45.8430°N, 66.7275°W, 27.VI.2004, 17.VII.2007, 30.VI.2008, R. P. Webster, regenerating mixed forest in brushy opening, sweeping foliage (4, RWC); Canterbury, near "Browns Mtn. Fen", 45.8978°N, 67.6273°W, 3.VII.2005, M.-A. Giguère & R. Webster, mixed forest, beating foliage (on roadside) (1, RWC).

Collection and habitat data. This is a polyphagous species reported from hosts in 19 families (Clark et al. 2004). Most adults of *S. hudsonias* from New Brunswick were swept from foliage in old field habitats. Adults were captured during July.

Distribution in Canada and Alaska. MB, ON, QC, **NB** (LeSage 1991).

Subfamily Cryptocephalinae Gyllenhal, 1813
Tribe Cryptocephalini Gyllenhal, 1813
Subtribe Pachybrachina Chapius, 1874

Pachybrachis bivittatus* (Say, 1824)*
http://species-id.net/wiki/Pachybrachis_bivittatus
Map 25

Material examined. New Brunswick, Restigouche Co., Jacquet River Gorge P.N.A., (at the Jacquet River) 47.8197°N, 66.0835°W, 23.VI.2008, D. McAlpine & R. Webster, river margin, on *Salix* foliage (20, CNC, NBM, RWC).

Collection and habitat data. Adults of this species were abundant on *Salix* foliage along a river margin during June. LeSage (1985) reared the larvae on decaying leaves of willow.

Distribution in Canada and Alaska. BC, AB, SK, ON, QC, **NB** (LeSage 1991).

Pachybrachis m-nigrum* (Melsheimer, 1847)*
http://species-id.net/wiki/Pachybrachis_m-nigrum
Map 26

Material examined. New Brunswick, York Co., 15.0 km W of Tracy off Rt. 645, 45.6837°N, 66.8809°W, 22.VII.2007, R. P. Webster, old red pine forest, sweeping foliage of *Comptonia peregrina* (2, CNC, RWC).

Collection and habitat data. Two individuals were swept from foliage of sweetfern (*Comptonia peregrina* (L.)) near an old red pine forest during July.

Distribution in Canada and Alaska. QC, **NB** (LeSage 1991).

Subtribe Cryptocephalina Gyllenhal, 1813

***Bassareus formosus* (Melsheimer, 1847)**
http://species-id.net/wiki/Bassareus_formosus
Map 27

Material examined. New Brunswick, Gloucester Co., Airstrip off Hwy 8, 47.3330°N, 65.4282°W, 24.VII.2005, R. P. Webster, jack pine/spruce forest, on foliage of *Compto-*

nia peregrina (4, RWC). **Northumberland Co.**, Blueberry Rd. off Hwy 8, 47.3210°N, 65.4229°W, 24.VII.2005, R. P. Webster, jack pine forest, on foliage of *Comptonia peregrina* (7, RWC). **Sunbury Co.**, 9.5 km NE jct Rt. 101 & 645, 45.7586°N, 66.6755°W, 17.VII.2008, R. P. Webster, old field with open sandy areas, sweeping foliage (1, RWC); 2.5 km S of Beaver Dam, 45.7735°N, 66.6852°W, 13.VIII.2008, R. P. Webster, powerline-right-of-way, sweeping foliage of *Comptonia peregrina* (1, RWC). **York Co.**, Charters Settlement, 45.8430°N, 66.7275°W, 20.VII.2008, R. P. Webster, old field area in regenerating mixed forest, sweeping foliage (1, RWC).

Collection and habitat data. Most adults of *B. formosus* in New Brunswick were swept from foliage of *C. peregrina* in old fields and other forest openings during July and August. The repeated collection of *B. formosus* from this plant suggests a close association with it that was not reported by Clark et al. (2004).

Distribution in Canada and Alaska. ON, QC, **NB**, NS (LeSage 1991).

Bassareus mammifer* (Newman, 1840)*
http://species-id.net/wiki/Bassareus_mammifer
Map 28

Material examined. New Brunswick, Kent Co., Kouchibouguac National Park, 7.VII.1970, H. Goulet, 7785K (1, CNC); same locality, 1.VIII.1978, D. B. Lyons, 7400P (1, CNC). **Madawaska Co.**, Edmundston, 19.VII.1970, C. M. Yoshimoto (2, CNC). **Northumberland Co.**, Boisetown, 10.VII.1928, W. J. Brown (1, CNC); 2 mi Bradlebane (sic) (Breadalbane) Rd., 11.VII.1966 (R. M. Smith), on white birch, 66–1907–02 (1, AFC). **Queens Co.**, Chipman, Harley Rd., 22.VI.1987 (D. H. Clark), on *Acer rubrum*, 87–2284–03 (1, RFC). **Restigouche Co.,** Indian Brook, (on NW Upsalquitch) 5.VII.1976 (Edward Belliveau), on trembling aspen, 76–2-3358–05 (2, CNC, AFC). **York Co.**, Durham, 8.VII.1956, G. W. Barter, on *Populus tremuloides* (1, AFC).

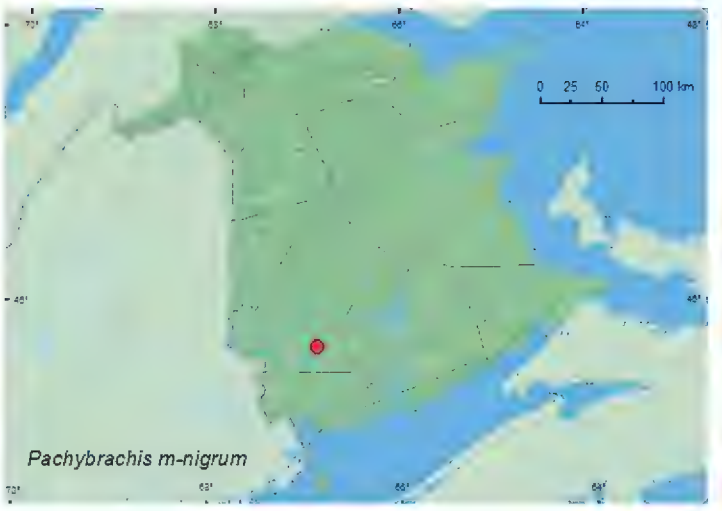
Collection and habitat data. Adults of *B. mammifer* from New Brunswick were collected from foliage of trembling aspen (*Populus tremuloides* Michx.), white birch (*Betula papyrifera* Marsh.), and red maple during June, July, and August.

Distribution in Canada and Alaska. AB, MB**,** ON, QC, **NB** (LeSage 1991; Riley et al. 2003).

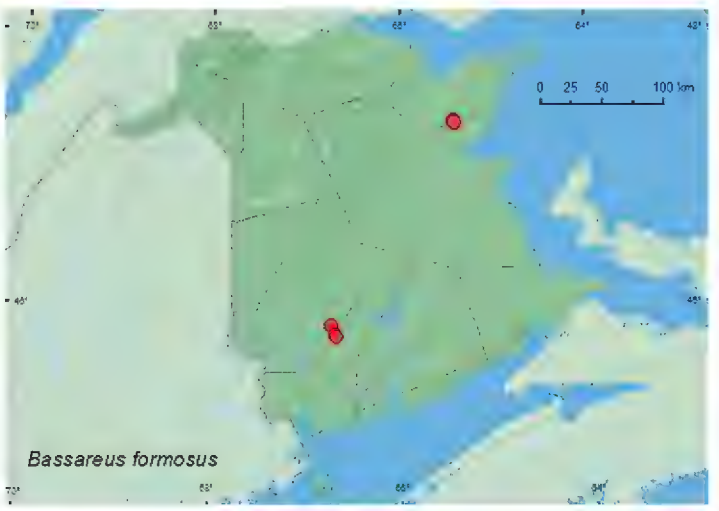
Cryptocephalus venustus* Fabricius, 1787*
http://species-id.net/wiki/Cryptocephalus_venustus
Map 29

Material examined. New Brunswick, Sunbury Co., 9.5 km NE jct. Rt. 101 & 645, 45.7586°N, 66.6755°W, 17.VII.2008, R. P. Webster, old field with open sandy areas, sweeping foliage (3, RWC). **York Co.**, Charters Settlement, 45.8340°N, 66.7450°W,

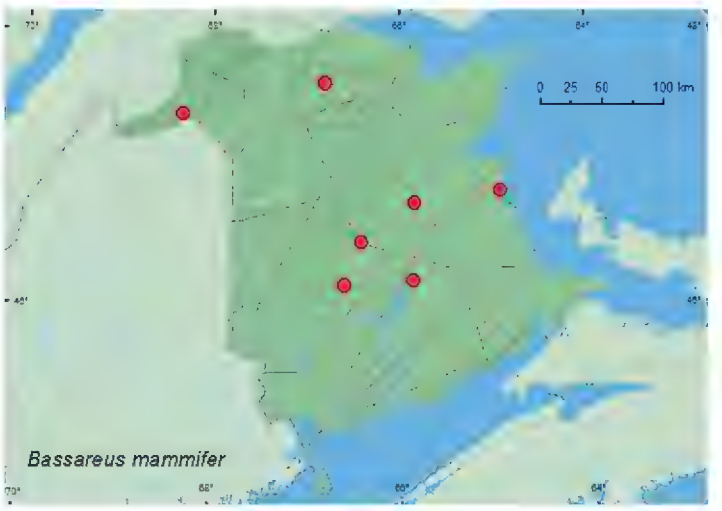
Map 25. Collection localities in New Brunswick, Canada of *Pachybrachis bivittatus.*



Map 26. Collection localities in New Brunswick, Canada of *Pachybrachis m-nigrum.*



Map 27. Collection localities in New Brunswick, Canada of *Bassareus formosus.*



Map 28. Collection localities in New Brunswick, Canada of *Bassareus mammifer.*

Map 29. Collection localities in New Brunswick, Canada of *Cryptocephalus venustus.*

10.VII.2005, R. P. Webster, old field, sweeping (3, RWC); same locality but 45.8430°N, 66.7275°W, 17.VIII.2007, R. P. Webster, regenerating mixed forest, sweeping foliage in brushy opening (1, RWC).

Collection and habitat data. This is a polyphagous species reported from hosts in 13 families (Clark et al. 2004). *Cryptocephalus venustus* was collected by sweeping foli-

age in an old field with sandy areas, a small old-field opening in a mixed forest, and in a brushy opening within a 20-year-old regenerating mixed forest. Adults were captured during July and August. LeSage (1986) successfully reared the larvae of this species on a mixture of dead leaves of *Alnus*, *Rubus*, *Salix,* and *Vaccinium* spp.

Distribution in Canada and Alaska. AB, SK, MB, ON, QC, **NB** (LeSage 1991; Riley et al. 2003).

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